

PATENT APPLICATION  
Docket No. 2705-91

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Alex TWEEDLY, et al.

Serial No. 09/539,408

Examiner: Jagannathan, Melanie

Confirmation No. 9490

Filed: March 31, 2000

Group Art Unit: 2666

For: TUNNELED DATAGRAM SWITCHING

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450DECLARATION TO OVERCOME A CITED PUBLICATION (37 C.F.R. 1.131)

1. The person making this declaration is Bruce Thompson, representative inventor of the above-referenced patent application ("Application").
2. Certain claims of U.S. Patent Application Ser. No. 09/539,408 are currently rejected in view of certain prior art, *inter alia*, under 35 USC §102(e) and 35 USC §103 in view of U.S. Pat. 6,711,164 B1 (Le). Le has a filing date in the United States ("Effective Date") of November 5, 1999.
3. Conception of the invention that is the subject of the claims in the present application occurred prior to the Effective Dates of the Le patent as evidenced by the attached Invention Disclosure document (Exhibit A) submitted internally at Cisco. Portions of the original Invention Disclosure document have been redacted because they do not relate to the invention.
4. Work on the invention was conducted continuously from a date prior to the Effective Date, until the date of filing of the above referenced patent application, and thereafter.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: 11/1/04Bruce G Thompson  
Bruce THOMPSON

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Exhibit A

## Patent Idea Details for Idea #53441

### GENERAL INFORMATION

Title: Tunnelled RTP core switching node implementation

ID: 53441

Patent No.: --, --

URL: [Application No. --]

Inventors: Alex Tweedly (agt) and Bruce Thompson (brucet)  
*More details on these inventors listed below.*

### Background:

Tunnelled CRTP is a multiplexing protocol which allows more efficient bandwidth utilization for Voice over IP voice streams than what is available today using existing compression techniques.

The protocol enables the implementation of a "multiplex switch" at the boundary from the edge network to a core network. The "multiplex switch" switches voice payloads from an initial multiplex bound from a voice gateway to the switch to a different multiplexed trunk which allows bandwidth gains from multiplexing to be carried through a network.

The "multiplex switch" is different from other schemes of multiplex switching (such as ATM AAL-2 switching) in that it can switch packets from one multiplexed stream to another without being given a per call mapping to switch voice payloads from one multiplex stream to another.

Summary: Covered in background

Advantages: The tunnelled CRTP encapsulation scheme carries enough header information in the multiplexed stream that packets in an initial multiplex stream bound for different final destinations can be broken apart at a "multiplex switch". The "multiplex switch" can switch packets from different calls on one multiplex stream on the inbound side to a different multiplex stream on the outbound side.

It is different from other implementations in that all of the information required to switch packets from one multiplex stream to another is contained within the multiplexed packets themselves. The "multiplex switch" is therefore different from other types of trunking switches (PSTN based TDM switches or packet based switches) in that it does not require per call control to map packets contained in the inbound multiplex to an outbound multiplex.

Cisco Use: This scheme described above would used to make Voice over IP networks get near the same bandwidth savings as Voice over ATM (AAL-2) networks Bandwidth savings in Voice over IP is currently a major issue

Method of Probing packet encapsulations at the input side of a suspected "multiplex  
Detecting Use switch" and  
By Other checking the encapsulation on the output side to see if the multiplex has  
Companies: changed.

Previous ---  
Public Use:

First Written ---  
Record  
URLs:  
Supporting ---  
Docs URLs:

Inventor Alex Tweedly (agt)